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THOMAS G. NEWMAN, Editor.

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EDITORIAL

"**Be Sure** the new hive is clean and neat.
Smear it with beeswax and with honey sweet.
Have no foul smell about it, for the bees
Are mostly all old maids, whom you must please
By making things quite tidy and 'so—so,'
Else in a fit of dudgeon, off they go!"
—*Wm. F. Clarke.*

Japanese Buckwheat is highly recommended as a honey-plant. It was introduced in this country in 1884 by Peter Henderson, of New York.

Mr. R. F. Holtermann, of Brantford, Ont., married a daughter of Mr. S. T. Pettit, of Belmont, Ont., on May 17, 1887. The AMERICAN BEE JOURNAL wishes for its brother editor a long and happy wedded life, hoping that neither of the pair will ever regret the step thus taken.

Those Who Think that "they know it all" are generally those who know the *least*, and usually pay the most for their lack of knowledge. In this ever-advancing age it is an imperative necessity to keep posted about everything having any bearing upon our pursuit in life. In no other business is it more necessary than in bee-keeping! Those who would succeed must *know* what is going on in the fields of production and commerce—must *profit* by the manifold experiences of those who have wrought in the same line—must study the subjects both of consumption and production—and learn all the facts about the local markets for honey, as well as those of the metropolitan centres.

This can only be done by reading the periodicals devoted to the pursuit of bee-keeping. No one in America can be *too poor* to subscribe for a bee-paper and yet own a colony of bees! But simply to have such a paper in your house will not avail. It must be read, studied, and be made of practical value. The knowledge of last year will not do for this year. Progress is written on every page of our daily existence, and to refuse to advance with the busy throng around us, is but to allow ourselves to be crushed under the wheels of progressive intelligence and advancing knowledge.

The Irascible Bees of India.—An exchange contains the following item concerning an attack of these insects upon a Royal party of church-goers. It says:

Lord Dufferin and his suite had a narrow escape recently at Dehra Doon. It appears that a swarm of irate bees ran amuck among the escort and attendants, and routed them horse and foot. Horses bolted, vehicles were smashed, ladies and children shrieked, and one poor charger belonging to an officer of the Ghoorkas, was so badly stung that it lay down, and a "smudge" fire had to be lighted around it before the bees were driven off. The viceroy and suite had just passed into the church, in order to attend service, before the apian legions delivered the charge.

This reminds us of an incident recorded in Forsyth's charming work entitled "The Highlands of Central India." It is this:

A friend once told me that as he was driving near a village some miles from Jubbulpore, he and his servant and horse were attacked by some irate bees without any real provocation. The enemy crowded round in such numbers that the situation became serious. After receiving several stings, and finding the horse becoming restive, my friend resolved to save his own life and that of his servant, which were really in jeopardy, at the risk of a little discomfort to other people. Accordingly, he whipped up his horse and made for the village, a cloud of bees keeping up with the trap without the least effort. When the village was reached, the bees, as my friend anticipated, found so many other objects of interest that they distributed their attentions with less marked partiality than hitherto. In other words, the cloud scattered among the villagers, who were so numerous that two or three stings apiece probably represented the total damage.

In the same book we find a painful instance of the terrible consequences of provoking these irate insects in one of the loveliest sights in India, the famous Marble Rocks of Jubbulpore. The writer says:

These rocks form a gorge through which the great river Nerbadda flows, and the marble formation extends for about a mile. The dazzling walls which shut in the river are studded with pendant bees' nests, and for any one sailing in a boat down the narrow channel to disturb the bees is a fatal proceeding. If any warning were required, it is given by a tomb, which stands on the outskirts of the village just above the gorge, to the memory of one who was stung to death in this beautiful spot. Actuated by a foolish impulse, he fired his rifle at one of the nests, whereupon the bees came down on him in such numbers that he attempted to save himself by jumping overboard. The relentless insects, however, still pursued him, with fatal results.

These bees are surely somewhat related to the *Apis dorsata*—the giant bees of Java—whose fiery temper and irascible disposition make it very dangerous to disturb their domicile. Frank Benton's experience with these bees was not very pleasant, as may be seen in back volumes of the AMERICAN BEE JOURNAL.

Late Catalogues for 1887, on our desk, are from—

J. W. Eckman, Richmond, Texas—4 pages—Bees, Queens, Chickens, etc.

S. W. Morrison, M. D., Oxford, Pa.—4 pages—Carniolan Queens.

C. F. Muth & Son, Cincinnati, O.—32 pages—Bee-Keepers' Supplies.

Edey & Son, St. Neots, Hunts, England—60 pages—Hives and Bee-Furniture, Poultry and Game Appliances.

J. C. Wilms, Waupun, Wis.—8 pages—Bees, Queens, Poultry and Eggs.

M. Lashley, Ambler, O.—1 page—Hive for Comb Honey.

Stolen Sweetness and Stings.—The Oakland, (Calif.) *Tribune* of May 3 contained the following item concerning a theft of bees:

Since before the days of the impenitent thief, the man who would steal a hot stove has topped the pinnacle of larcenous fame. His fame bids fair to become a thing of the past, and all on account of the superior larceny of a woman of East Oakland. There came to the office of Prosecuting Attorney Earl this morning a sad faced man—an apiarist whose natural sweetness had been soured o'er with a thick superstratum of woe. This is the tale he told: He keeps his busy bees—and his bees assist in keeping him busy—on a lot adjoining the domicile of Mr. and Mrs. Foster on the East Oakland heights. His bees swarmed, and Mrs. Foster stole the swarm—so he said. Attorney Earl was prepared to meet the emergency of a purloined stove of superior caloric, but the theft of a swarm of bees was too much for the statutes in such cases made and provided, and the woe-steeped apiarist was refused the warrant for which he prayed. Incidentally the husband of the woman, who had made away with the bees, had made a pass at the apiarist of the soul-sick mien, but Earl hardly considered the assault sufficiently aggravated for police interference, and the words the sad man spake, as he went his way, had more sting than honey in them.

In the next day's issue of the same paper, the editor made these remarks on the case:

At what stage in its career does the bee become a wild beast? was the question which presented itself to the mind of Prosecuting Attorney Earl, when the East Oakland apiarist wanted a warrant for the arrest of his neighbors, who, he said, had stolen one of his swarms. The bee is property when he stays at home, but when he wanders he belongs to the *feræ naturæ*. He chooses his own master, and very often puts his mark on him. Perhaps Officer Shorey might be sent with a search warrant to determine whether these bees have become wild beasts or not.

"Praktisk lommebog i tidsmæssig biskjotsel," is the title of a new bee-book in the Norwegian language, by Ivar S. Young, Christiania, Norway. We acknowledge the receipt of a copy of it, but as we cannot read it, we can only judge of the contents by its illustrations, which are first-class, and show that it is a modern and progressive little book.

Swarming is now the order of the day. Be sure to have hives in readiness to use for increase. The weather to-day—Saturday—is hot and damp, from frequent showers, and is just the right kind for honey production. White clover is just commencing to bloom, and all around the apiary is as "merry as a marriage bell." From all accounts we conclude that the clover generally has not been damaged by the drouth, to any extent worth mentioning.

Our Success as honey-producers depends upon the quality of the queens. The best queen should have sufficient bees to enable her to lay to her full capacity.

Union Convention at Chicago.—The North American Bee-Keepers' Society and the Northwestern Bee-Keepers' Society will meet in joint convention in Chicago, Ills., on Wednesday, Thursday and Friday, November 9, 10 and 11, 1887. The Secretary's notice will be issued soon—naming the place of meeting and other particulars.

QUERIES

With Replies thereto.

[It is quite useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Shade for Hives.

Query 427.—If you had a small apiary, the colonies of which were in single-walled hives, in this latitude, and without any shade for the hives, what kind of shade would you recommend?—J. S., New Hampshire.

Trees or grape-vines.—DADANT & SON.

A board 2x3 feet in size.—W. Z. HUTCHINSON.

Paint the hives white, when no shade is necessary.—G. M. DOOLITTLE.

The shade made by a grape-vine, fruit-tree, etc., will be sufficient.—J. P. H. BROWN.

Face the hives to the north and lean boards against them where the sun strikes them.—C. W. DAYTON.

I should use a flat board on top of each hive that would project far enough to give the necessary shade.—J. E. POND.

A board longer and wider than the hive, letting it project in front and on the west side.—H. D. CUTTING.

Shade-boards give good satisfaction in my locality. They may be made of any thin, cheap lumber or of shingles. I would make them some wider and longer than the cover to the hive.—G. W. DEMAREE.

For immediate use, boards projecting over the south side with an air space between them and the hive.—C. C. MILLER.

Face the hives to the east, and use a shade-board 2x3 feet, and place it on the hive long way east and west, and projecting all of its extra width over the south side. This is the best shade in the world, and is needed with *any* kind of hive.—JAMES HEDDON.

I make for my hives what I call an "under cover." It is used in place of enameled cloth, and is made simply of thin boards with three cleats an inch thick on top, with strips tacked on below to make a bee-space. A plain board with cleated ends is laid on top for the cover, which is painted, the other not. The air-space between the two covers I find to be all that is necessary to prevent over-heating in hives placed in the sun. If the cover lies directly over the sections, the hot sun will drive the bees out of the supers.—G. L. TINKER.

A shade-board raised 4 or 5 inches above the hive. It is the best shade. If one fears wind he can weight it with one or two bricks. By nailing the shade-board to two boards set edgewise, we keep the shade-board from warping, and also raise it the proper height above the hive. A narrow second board, parallel with the shade-board, nailed into ends through the cross boards, makes a nice place for bricks, which are thus hid. I like these very much.—A. J. COOK.

Grape-vines, trees or boards will be good for shade.—THE EDITOR.

Trebling the Number of Colonies.

Query 428.—I have 20 colonies in 9-frame Langstroth hives, which I wish to increase to 60 colonies, *i. e.*, make an increase of 2 from each colony, and at the same time get as much comb honey as possible. What is the best plan to pursue?—G. B., Ontario.

Natural swarming.—G. L. TINKER.

I should let them swarm naturally, hiving second-swarms.—G. M. DOOLITTLE.

Divide the colonies, and give young laying queens. Use comb foundation, and feed if necessary in order to build up rapidly.—J. P. H. BROWN.

Mr. Hutchinson's plan. When you get beyond 40 colonies you had better halt, unless you are certain of a good fall flow of honey.—C. W. DAYTON.

This question involves too long an answer for this department.—JAMES HEDDON.

I should let all swarm at once, and form nuclei and build these up into strong colonies after the early harvest is over.—A. J. COOK.

Let them swarm; and after a colony has cast a second swarm, *then* practice the Heddon method of preventing after swarming.—W. Z. HUTCHINSON.

If I wanted "increase" I would work for that; if honey was my object, I would work the 20 colonies for all they were worth, and increase as slowly as possible.—H. D. CUTTING.

I do not know, as I know nothing of the locality and surroundings. It may be set down as a rule, however, that very little surplus can be taken in any locality when so large an increase of colonies is made. To do it in my own locality, I should expect to be obliged to feed some to get all in a condition for winter.—J. E. POND.

Your location must be an extra good one for honey-producing, if you can make such an increase and get any surplus honey. You must have powerful reasons for such a heavy increase of bees, or you would not attempt it. Such rapid increase is not profitable unless you can sell the bees at a high price. I would advise just one swarm from each colony. By this course an apiary can be built up fast enough, and a good crop of surplus honey obtained. This is the safest course to pursue.—G. W. DEMAREE.

Permit one swarm from each colony, then increase by division; but care must be taken not to weaken the colonies, and not to divide unless the colonies are strong enough to permit it to be done with safety.—THE EDITOR.

Getting Honey Instead of Increase.

Query 429.—How would it do, if a person prefers honey instead of increase, to hive a swarm on frames with just starters in them, remove the old colony and place the swarm on the old stand, and the next day after destroy all queen-cells, put the old colony on top of the new one, and keep the honey extracted when ripe?—N. S., W. Va.

Undoubtedly the plan would work well in producing extracted honey.—G. L. TINKER.

If you make the queen stay down below, it is all right.—C. W. DAYTON.

If you intend to extract the honey, why not give them two stories of combs at the beginning, and thus prevent the swarming?—DADANT & SON.

With me bees show little disposition to swarm when working for extracted honey.—G. M. DOOLITTLE.

Your plan would work well, but then close attention would be required or some swarms would issue now and then; particularly in a large apiary.—J. P. H. BROWN.

The plan would delay swarming, but not necessarily prevent swarming. Besides, there would be a loss by reason of the bees having to build a full set of combs, a large part of which would be drone or store comb. Plenty of empty combs on hand at the beginning of the season, is essential to a good yield of liquid honey in my locality.—G. W. DEMAREE.

I should prefer to place the swarm on the old stand, and the old colony or hive by the side of it, with the entrance turned ¼ or at right angles with the new hive. Put plenty of sections on top in place of bees and brood from the old hive.—H. D. CUTTING.

It might work well and it might not; I think fully as much honey would be obtained, and with less trouble, by tiering up early in the season, and on so doing as the bees increased in numbers.—J. E. POND.

It would "do," but the honey and brood would be mixed in both stories. I would use a queen-excluder and keep the queen below, and, if necessary, add another story on top filled with combs.—W. Z. HUTCHINSON.

You do not explain enough. If you are to work for extracted honey you could remove the queen-cells, extract all honey, and put on the upper story, hiving the bees right in the same hive. If you wish comb honey, do as Doolittle, Heddon and Hutchinson advise; if you want extracted honey, do as I suggest in the last edition of my book; and you need not have any increase. In working for comb honey you will double colonies.—A. J. COOK.

If you use a queen-excluder it might work. If necessary give the bees surplus room above.—THE EDITOR.

Correspondence.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♂ north of the center; ♀ south; ○→ east; ←○ west; and this ♂ northeast; ○↖ northwest; ○↘ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

Perfect System of Wintering Bees.

W. Z. HUTCHINSON.

On page 312 I stated that at another time I would say more concerning the subject then treated of, and also explain some of the other points in which I differ from my friend Clarke in his review of my book, on page 229.

To the ordinary honey-producer, I feel certain that no advantages would accrue from forcing early brood-rearing by means of artificial heat, even if it should be made successful. The comparison of market gardeners forcing early vegetables well illustrates the idea that Mr. Clarke desires to express, but is not analogous so far as *results* are concerned. Early-raised vegetables sell at high prices; bees that are hatched "too previous" are simply "boarders."

Some have asserted that, "they never saw a colony too populous at *any* time of the year." I have. Of what use is a horde of workers when there is no honey to gather? I understand, of course, that there must be sufficient bees to keep up the requisite heat during the winter, but further than this, bees are simply "consumers." The fewer bees we can have, except during the honey harvest, the greater our profits. (Mr. Doolittle has given us some most excellent articles upon this subject, and all holding different views would do well to look over the back volumes of the Bee Journal and read them.) The cellar wintering of bees enables us to reduce their numbers to the minimum during the non-producing season; while spring protection helps us to secure the maximum of workers in time for the harvest. Bees naturally generate sufficient heat to enable them to rear all the brood they can care for, provided they are so protected that all the heat is saved; and there is plenty of time, from the beginning of the brood-rearing until the harvest opens, for the bees to fill the hives with workers and the combs with brood.

By a perfect system of wintering, I mean one that will invariably produce the same results. One in which the conditions are likely to be different each year, can never be a perfect system. We can, of course, have uniformity of stores when wintering bees in the open air, but the severity and irregularities of the weather are beyond our control. One winter may be "open," and in the next the cold may be severe and long-continued. In a good cellar we can control the temperature, the ventilation, the moisture, etc., and we can have the conditions the same every year. In a recent article in *Gleanings*, Prof. Cook expressed my views exactly when he said: "Now, why I prefer a cellar is this: If the cellar is right, we are always safe, providing we look out for food. With chaff hives we are not safe; at least it so seems to me, even in the latitude of central Ohio. Occasionally a long, severe uninterrupted winter comes, and the bees are swept away, when those in the cellar are as safe as ever. Of course the cellar *must* be right, but that can be secured with ease and certainty."

Rogersville, ♂ Mich.

Bee-Keepers' Magazine.

Superstitions of Bee-Culture.

REV. J. W. SHEARER.

It is amusing to note the superstitions and fancies concerning bees, which have existed at different times, some of which still have their faithful adherents in rural places.

There is in Lincolnshire, Essex and Cornwall in England, a superstition that bees desert a hive on the occasion of a death in a family, unless informed of it by rapping on the hive. The belief that hives should be wrapped in mourning is current in Lincolnshire.

In Northampton the entrance of a bee into a cottage is deemed a certain sign of death, and if a swarm of bees alight on a dead tree or a dead branch of a tree, there will be death within a year.

In Yorkshire there is a custom of inviting bees to the funeral. These were doubtless originated from an observation of the fact that bees are attracted by the scent of fresh varnish, working on superstitious minds.

It is said by some that bees will never live in a quarrelsome family. What a blessing if among bee-keepers such an idea would quell all rising feelings of difference in the family.

Some think they will not thrive if stolen, whilst in other places it is considered *unlucky* to purchase bees; that the only way to get them is to have them given, catch a wild swarm, or to steal them.

Acting on this silly superstition we have known good people to go to a neighbor's house, take a hive of bees without his knowledge, and leave in payment some other goods, thinking that "ill luck" would follow them if money be paid. In this superstition there is a shade of truth. Among such people bees are got from their nearest neighbors in summer when bees are flying freely and carried quietly home. Of course the old bees return to the old stand the next day, and the removed hive is "unlucky" because weak in bees for some time until it can recuperate. If the colony has already swarmed, as is often the case, the remaining bees are too few to build it up in a good swarm that season. The observation of results without a knowledge of the cause, or the method of preventing it, gave rise to the superstition in minds already inclined thereto.

The Georgics of Virgil contain some of the common superstitions at that early period. This writer, with others, attributes the virtue of "tanging," to attract bees, to qualities implanted in them by Jupiter that distinguish them from solitary bees and other insects.

This fable is grandly recorded in the mythological belief of this period. Kronos, "the harvest God," having succeeded his father Uranos on the throne of the gods, married his sister Rhea, who bore him several children, among whom was Zeus or Jupiter. To prevent the fulfilment of an old prophecy that his first born should succeed him on the throne, Kronos swallowed his first five children soon after they were born. When the sixth child Zeus appeared Rhea determined to deceive the husband, and gave him a stone carved in the shape of an infant, which he swallowed, and believed himself freed from danger. Meantime Jupiter, the new-born child, was conveyed to the island of Crete, and concealed in a cave on Mount Ida. The nymphs Adrastea and Ida tended and nursed him, the great Amalthea supplied him with milk. Lest the infantile cries should reach the ears of Kronos, the Kuretes or Corybantes (the priestesses of Rhea) were stationed at the mouth of the cave to keep up a continual din by clashing of their cymbals. This attracted a swarm of bees, which settled in the cave, and furnished honey for Jupiter.

This statement was received by the early Greeks as gospel. From the statement they accepted the fact that bees are attracted by such noises and applied it in practice to settle runaway swarms. Hence the origin of "tanging."

Is it now time that people should abandon this foolish superstition, which originated in old Grecian mythology? The question answers itself. This superstition also points towards the probability of superior knowledge of bee-culture among the Greeks from whom the late modes of management were derived, as indicated by the presence of this superstition which originated in their mythology. It must have originated when men believed and acted on their belief in mythology.

There is a curious superstition concerning the *origin of bees* from putrid cacasses. This was the general belief of the ancient. Virgil's recipe for the production of bees in his fourth Georgics is so striking that we quote a few lines of Dryden's translation:

A steer of two years old they take whose head
Now first with burnished horns begin to spread;
They stop his nostrils while he strives in vain
To breathe free air, and struggles with his pain.
Knocked down he dies; his bowels bruised within
Betray no wound on his unbroken skin.

* * * * * * *

The tainted blood in this close prison pent,
Begins to boil and through the bones ferment:
Then wondrous to behold, new creatures rise,
A moving mass at first, and imped with wings
The grub proceed to bees with pointed stings;
And more and more affecting air, they try
Their tender pinions and begin to fly.

Hollingshed repeats this belief in his "Chronicles of England, Ireland and Scotland" as late as 1807. "Hornets, wasps, bees and such like whereof we have great store, and of which an opinion is conceived, that the first do breed of the corruption of dead horses, the second of pears and apples corrupted, and the last of kine and oxen; which may be true, especially the first and the last in some parts of the beasts, as also the second, since we never have wasps but when our fruit beginneth to wax ripe."

Swammerdam tells us that in his day many great men believed these stories, and among them Gœdært and De Mei, who ascribed the origin of bees to certain dunghill worms.

For the American Bee Journal.

Rendering Old Comb into Wax.

IRA BARBER.

Last winter, at the Albany and New York Bee-Keepers' Convention, I read an essay on rendering old comb into wax. It was the last plan that I had tried, and one that had proved a great success with the kinds of comb that I had to work with at that time. On page 88 it is reported as follows:

"Ira Barber uses a large kettle, holding 25 pails of water, and melts up the old comb from 20 to 25 hives at once, putting in only a few combs at a time; keeps a good fire, but not to boil; takes out with an 8x10 inch basket; strains as fast as dipped, and cools in large dishes."

The comb that I rendered after that plan was nearly all filled with bee-bread, and would sink to the bottom of the kettle, leaving but little refuse on top, and the wax could be readily dipped off by sinking a wire basket into the mass, and dipping the wax from the inside of the basket. A neighbor of mine lost a large part of his bees the past winter, and has just tried my plan of getting the wax out. The result is, that he meets with perfect failure. The comb that he has is nearly free from bee-bread, and when melted in the kettle it nearly all floats to the top, and not 10 per cent. of the wax can be dipped off; while with combs filled with bee-bread, as mine were last year, fully 90 per cent. could be dipped off.

When I gave the essay to the public at Albany, I had no doubt in my mind but what any old combs could be rendered successfully on the plan given, but after seeing it fail on ordinary comb, I think it my duty to caution those interested in the matter, before too many meet with failure. With comb containing bee-bread it is a perfect success. With old comb without bee-bread it is a failure.

Two years ago I had some 75 or 80 colonies lose their queens while swarming, and at the end of the honey season the weather was so unfavorable for young queens to fly, that the result was I did not get them queened in time to save them, and as they had no queens all through the honey season, the combs became perfectly paved with bee-bread.

The honey season was an extra good one that year, and the honey went into the sections while the bee-bread lay in the brood-combs below, and this was the comb that I had to get the wax out of, and that the kettle-plan proved such a success with. I hope some have tried the plan given at Albany with ordinary comb.

De Kalb Junction, N. Y.

Indiana Farmer.

Honey Production in California.

DELOS WOOD.

My location is in one of the many canyons of the Santa Inez mountains, in Santa Barbara County, Calif. The ground occupied by the apiary slopes to the south, and is sheltered from wind by the abrupt hills that form the sides of the canyon. The hives are arranged in rows eight feet apart, running north and south, and five feet between the hives in each row, which gives room to run a wheel-barrow at the back of each row, and the five foot space between the hives affords sufficient standing room for the operator at the side of the hives, the entrance facing the east. The rows being eight feet apart, leaves sufficient room for the working bees to go and come without interfering with the manipulation of the hive in the row in front.

I work entirely for extracted honey, and use the same sized frames in the supers as in the brood-nest. The hive is a modified Langstroth, the frame being shorter and deeper than the standard Langstroth. The covers and bottoms are not nailed to the hives, and when more room is needed I take off the cover and put another full sized hive on top, generally, using them two stories high, but running them up three and four stories high when needed. I have run them up seven or eight, but this is not to be commended, only when the apiary is large, and sufficient help cannot be obtained to extract the honey as fast as it is stored, two and three stories being the most profitable. The extracting house is at the south end of the yard, which gives a down grade to wheel the honey from the hives to the extractor.

The door opens in the northeast corner of the house. In the centre of the north wall, is a turn-table, by means of which the combs full of honey are turned into the house, and the empty combs are turned out without letting the bees into the building.

On the other three sides I have windows made to slide, to admit air and light. Outside of the windows the opening is covered with wire cloth extending 6 inches above the opening, leaving a space of ½ of an inch between the wire and the siding at the top to allow room for the bees to escape when they happen to be brought in on the combs. They fly to the window, run up the wire and run out. Bees trying to get in, pass up to the top of the window, then drop down, and go up again, and drop down, but the wire going above the opening, they cannot see in, and do not pass over.

A table 2 feet wide and 6 feet long stands at the west window for uncapping; a beveled hole is cut through it at one end, beneath which is placed a galvanized iron can 20 inches high, and 22 inches across. In this can is a galvanized wire basket, with stout rim and handles of sufficient strength to hold the weight of the cappings, which fall through the opening in the table. The basket should not reach the bottom of the can by 6 inches or more. The wires should be of coarse mesh, to allow the cappings to drain freely.

A cleat nailed across the hole in the table, with a ¼ inch iron pivot with a dull point extending upward ¾ of an inch on which to rest the frames while uncapping, is a great help in turning the combs.

The extractor stands at the end of the table in the southwest corner of the room, and holds eight frames at once; is pinion geared, no cogs to break, or belt to slip, and runs the lightest of any extractor I ever used. The combs are all reversed at once by moving a small lever about 6 inches without taking them out, and the eight are reversed quicker and easier than one could be lifted out.

The honey runs out of a faucet at one side of the bottom into a "float strainer," and is carried by a 2-inch tin pipe through the south wall into a galvanized iron tank outside of the house.

The float strainer is a tin can about one foot square, with a partition reaching within ½ of an inch of the bottom, placed about 4 inches from one end. In the small side a coarse wire basket is hung, into which the honey runs from the extractor and passes under the partition, runs up on the other side to the top and flows through the pipe which connects this part of the strainer with the honey tank. The chippings of comb and other impurities float, and nothing but pure honey passes under the partition. The wire basket can be lifted out and scraps emptied as often as is required.

The honey tanks are round, and of a capacity of one ton, made of galvanized iron, a hoop of ¼-inch round iron, large enough to pass off and on easily, covered with heavy brown muslin, constitutes the cover of the tank, the weight of the hoop holding the cloth tightly over the top of the tank. The heat from the sun evaporates the excess of moisture which escapes through the cloth. A light cover of ⅛inch lumber is put over the tank at night to protect it from dew or rain. The ripe honey settles to the bottom, and is drawn off through a faucet into tin cans and sealed up by screwing the covers tightly on. The unripe honey rises to the top of the tank, and is ripened by the heat from the sun. The cappings which fall into the basket under the table after draining, are removed to a "sun ex-

tractor" and melted into wax under glass. The honey remaining in the cappings will sink to the bottom of the extractor, and is drawn off through the faucet.

A common flat-bottomed wheel-barrow is a good thing for taking honey from the yard to the extractor. I have a box fastened over the wheel with a division in it. One end is just large enough to fit the smoker, the other carries a paper of wire nails, a small hammer, a long, narrow honey-knife, queen-cages, etc., etc.

I use nine boxes with hinged covers, and cleats on the end of the boxes for handles, each box holding five combs hung the same as in the hive. Three boxes, filled with empty combs, are taken on the wheel-barrow to the hives, then the combs with honey are taken from the hives and put in the boxes, and the empty combs put in the hives. When the boxes are filled with honey, they are wheeled to the house and put on the outside of the turn-table. The assistant working inside places a similar box with the emptied combs on the turn-table inside. The table is turned carrying the honey in and bringing the empty combs out. As fast as the honey is extracted the combs are put in the boxes ready to send out. The combs are not returned to the hives from which they are taken, but to the others, thus avoiding opening the hives a second time. Any combs containing brood are placed by themselves and given to such colonies as may need strengthening.

Santa Barbara, ♀ Calif.

For the American Bee Journal.

Safe Introduction of Queens.

AARON BENEDICT.

I have read Mr. Doolittle's article on page 309, on the subject of introducing queens and dividing colonies, and I consider his plan excellent as far as it goes. As my plan of doing the same thing is a little different, and with me is very nearly an entire success, I will give it.

I always drum out the bees and queen, no matter what kind of hive they are in. If it is a movable-comb hive, I remove the honey-board and surplus arrangement, place the cover back on the hive, and then give the bees a little smoke at the entrance; Mr. Doolittle gives the smoke the first thing.

I now commence to jar the hive as soon as the bees are up in the cover, and shake them out on a cloth. As soon as I find the queen, I remove her. I have in readiness a cupful of water in which has been steeped catnip, pepper-mint or horse-mint, either will do; it need not be very strong. I take this decoction in mouth, mouthful after mouthful, and spatter it down in the hive, bees, and on the cloth, thereby wetting the bees. I now take some more of the same in my mouth, blow it on the queen in her cage, and then let her run in with the bees, when the job is done.

I have introduced hundreds of queens for myself and others in this way in the past 15 years, with almost entire success. In the drumming process the bees are filled with honey and will not hurt anything in that condition. I do not think I lose one queen in fifty. Last August I went 36 miles and introduced 17 queens. I put them in in less than a day. I have since heard that the bees are all changed to Italians.

Mr. D's plan of making colonies by dividing is correct. When bees swarm naturally they fill themselves with honey so they will have something to begin to keep house with. The drumming causes the bees to fill themselves with honey; in this they are like a natural swarm. I would have this done late in the afternoon, and let them remain in the forcing box over night; in the morning throw a cloth over the old hive, then hive the swarm, and in about an hour remove the cloth, when it is done.

Bennington, ⊙ Ohio.

Exchange.

Bees as "Pomologists."

J. M. STAHL.

Not a few believe that bees injure fruit. They are frequently accused of injuring peaches, apples, berries, and even grapes. I do not believe this; but though it be correct, the bees are the best friends of the horticulturist. Did you ever think why? Sex is not confined to the animal kingdom by any means; plants are sexual. The sexual organs are in the blossoms. For the blossoms to produce fruit the ovules must be fertilized by the pollen from the anthers at the summit of the stamens, which falls upon the stigma, and traversing the style of the pistil, reaches the ovary.

In this process of fertilizing, insects are important aids, and in quite a large number of cases are essential aids; and of all insects bees are the most important workers. They seek the honey to be found in the blossoms; and while on this quest they disturb the anthers, knocking the pollen upon their wings and bodies, and in this way conveying it to waiting stigmas. In a large class of flowers the work of insects is essential to fertilization, either because the stamens and pistils of the blossom do not reach maturity at the same time, or the pistils are turned away from the stamens, preventing the pollen from falling on the stigmas, or else the anthers are below the stigmas, having the same effect; while other blossoms have no pistils or else no stamens; in all these cases self-fertilization is impossible.

To fertilize such blossoms it would seem that the creation of the bees had been especially designed, so well do they perform their work. First, the bees are formed just right to accomplish it. Then the flower has the honey to attract the bee; and when the conditions are most favorable, the flower sends out a fragrance to yet further attract the bee. Prof. Gray calls this fragrance the "flower's advertisement." But it may occur to the mind of the reader that the bee would visit flowers of different species and thus occasion the greatest confusion. But it is not so. The bee has a keen sense of taste, and never mixes its nectars, but as the nectar of all blossoms of each species tastes alike, it confines each visit to one species. Aside from this, having found nectar in one blossom, it would naturally seek in others having the same appearance and fragrance. To get at the honey the bee must twist itself into all possible shapes and positions—a position of Nature to secure the dislodgement of the pollen; and she also doles out the nectar in small quantities that the bee may be compelled to make frequent visits. It is also a fact worthy of note that the blossom does not yield nectar until it is ready for its part in fertilization.

This phase of the phenomena is curious enough to be interesting, but there is an intensely practical aspect of the case. Nature would not go to so much trouble for nothing, and if there was not an important work for the bees to perform, there would not be these provisions made for it. We are forced to the conclusion that where there are no bees many blossoms will fail of being properly fertilized, and hence fail to mature fruit. ....When we consider the work done by bees, we are justified in calling them "pomologists."

I am certain that bees do not injure fruit at all. Most of the destruction blamed upon them is the work of other agents. The jaws of the bee are too weak to puncture the skin of the most delicate grape. Only after it is pierced does the bee harm the fruit.

Quincy, ○ Ills.

For the American Bee Journal.

Can Farmers keep Bees Profitably?

CYRUS T. FOX.

I send you the following report of the proceedings of our recent meeting as reported for the Reading, (Pa.) *Times*, when the bee-question was discussed. It is as follows:

This question elicited quite an interesting discussion at the meeting of the Berks County Agricultural Society.

An essay on the subject by a Robeson township farmer, was promised by ex-President Jacob G. Zerr, of Union township, which will be presented at the next meeting; and a letter was read from William G. McGowan, of this city, regretting his inability to be present on account of illness. Mr. McGowan furnished a number of pamphlets on bee-culture for free distribution.

John Gottshall, of this city, opened the discussion by stating that he had kept bees for fifty years, in Alsace township and in this city. After his long experience he regarded the Egyptian bee as the most profitable, and thought every farmer would find it of

advantage to pay more or less attention to the subject.

Ezra High, of Cumru township, said that he had been keeping bees for years, but he does not pretend to understand bee-culture thoroughly. If every farmer kept from 4 to 5 colonies there would not be enough material for them to subsist upon. They would soon exhaust everything and starve. He put these questions to the President, Judge Stitzel, who spent some time on the Pacific coast: "What is the bee-pasture in California? Is it sage bush?"

Hon. George D. Stitzel answered that California is divided up in valleys and mountains running north and south. On the mountains the wild sage grows luxuriantly, which is the favorite pasture for the bees of central and northern California. In the orange country, in the southern portion of the State, the bees feed upon the orange blossoms along with the sage, and the honey of southern California is superior to that produced in any other section of the State. The bees come long distances to get the orange bloom, and there is a decided orange flavor about their honey. He said that he takes no interest in the keeping of bees, as they do not like him.

Dr. A. Smith said that bee-culture is something that will pay. There is no trouble about providing sufficient food, as bee-keepers make the pasture for the bees, by putting out white clover, buckwheat, etc. Bee-culture requires a person who is peculiarly adapted to the business. If the bees are averse to you, it is difficult to succeed with them. There are persons who cannot go near them without being attacked. The speaker kept bees for about 25 years, and could do anything with them. He found it a most interesting avocation, and would not discourage it. The question is: Will it pay? He had obtained over 200 pounds of honey from one colony, but the very next winter he had but one colony left. Now, if the farmers of Berks county have time to devote to the industry, they will find it a profitable business, but it will not pay unless you give it proper attention.

Reuben W. Scherer, of Oley township, one of the vice-presidents of the society, said that at different meetings he had expressed himself in favor of "mixed farming;" that is, that farmers should have a diversity of interests, and not have their time and attention absorbed by one or two special things. He was, therefore, decidedly of the opinion that half a dozen colonies of bees can be profitably kept by any farmer. There is nothing on the speaker's farm that pays better than bees. He keeps just enough bees to provide sufficient honey for his own table. He, therefore, always has an abundance of the mellific product, and finds it a delightful thing to have in the house. He has a 10-year-old son who is an adept in looking after the bees. If there is a colony swarming, the boy can attend to it, or the speaker's wife can. He believes that every farmer can engage in bee-culture, so far as having the time at his disposal. As to the profit, he knows of men engaged in the business who give it great care, that derive a handsome income therefrom. There is a man in his neighborhood who has from 50 to 100 colonies of bees. He observes improved methods of management, and does well.

How to manage so as to get the best results out of bee-keeping is what the farmer wants to know. The speaker has had this experience: In the spring of the year there is no difficulty about the bees obtaining provender. The best of all honey in his section is produced from peach and apple blossoms. White clover grows spontaneously in his vicinity, and always furnishes excellent pasture. Then a piece of buckwheat can be sown convenient to the apiary, and this will give the bees sufficient work for the remainder of the summer. As for the different kinds of bees, the Italians are well enough in their place; but as for himself he would prefer the little black bees. As to bees liking some people and not others, much depends upon how they are approached. They hate whisky and tobacco. There is another feature about bees which ought to induce every farmer to keep them, and that is their working qualities. The speaker has often taken a lesson from the bees in hot weather, when he has felt tired and exhausted by the heat. He has turned to the bee-hives, and after observing the industry of the busy little insects, it has made him go back to work with renewed energy and increased perseverance.

John M. Moyer, of Robeson township, said he could not see how Mr. Scherer's son, aged only 10 years, could hive a swarm of bees. He then related a funny incident of how he had called together his whole family, and then all his neighbors, using tin kettles and all kinds of utensils wherewith to create a din, and yet the bees rose high in the air, and were off, notwithstanding all the efforts to secure them. At his father's house as many as 20 colonies of bees were kept, and at least one-half of them went off every year.

Hon. S. E. Ancona said that he was pleased with what had been said by President Stitzel in regard to the production of honey in California. He then related his own experience in keeping bees, and how when he resided several years ago in Muhlenburg township, he paid some $25 or $30 for a patent hive, and left his bees to forage upon his neighbors generally, while he indulged in bright visions of an abundance of honey to gladden his store. Unfortunately he got no honey, and at the end of his experience had no bees. He then presented the hive to the late Alexander Burnett, and in about two years was given a box of honey, which was all that he realized from his investment. The speaker believed, however, in encouraging everything of this kind. Diversified interests are essential to success in agriculture in this country. It is impossible to compete with the West in the matter of raising grain. He is satisfied that bee-culture can be conducted successfully so as to add very materially to the comfort of one's home. In conclusion he alluded to lesson of industry and thrift, which had been conveyed by Mr. Scherer in his remarks, and which aptly illustrated the force of the old spelling-book rhyme:

> "How doth the little busy bee
> Improve each shining hour,
> By gath'ring honey all the day
> From ev'ry opening flower."

Mr. Scherer replied to Mr. Moyer in regard to his son hiving bees. He says that the boy does it without the least trouble. A colony may swarm on the topmost limb of an apple tree, and the boy will go to the end of that limb, cut it off with a saw, and bring the swarm triumphantly to the hive. Upon one occasion a strange swarm was at the end of a limb of a locust tree; the boy cut off the branch, and carried it home on his shoulder fully a quarter of a mile. It proved to be colony of Italian bees, and was got for the mere hiving of it. As to hives, no one would catch him paying $30 for a patent hive! He purchased a colony in a common box, 13 inches square for $4. A surplus box was placed on top of this for the honey, and that constituted the bees' quarters, and did exceedingly well. In constructing hives, he takes either long straw, or makes them of any kind of boards, putting cross pieces of wood inside, and never had a colony of bees to freeze. He has no belief in the various superstitions about bees, the beating of kettles when they are swarming, etc.

John M. Moyer inquired whether any of his swarms had gone off.

Mr. Scherer replied that upon one occasion he had delayed too long, and a swarm went off for him.

Mr. Moyer—Did you try to stop them?

Mr. Scherer—After they had started there was nothing that could have been done that would have brought them back.

Mr. Moyer—Did you use any words about it?

Mr. Scherer—That would have been just as useless as beating on tin pans and kettles.

Capt. William G. Moore, of Womelsdorf, believed that the majority of farmers would not be successful in bee-culture, especially after what had been said in regard to the experiences of some of the gentlemen present. A friend residing in Heidelberg township invested $50 in bees, and had $5 worth of money out of his investment.

John Gottshall said that he thought it would pay every farmer to have about half a dozen colonies. Rigged out with a good bee-veil, and a gum coat, with his hands first washed in strong salt water, he has no trouble in examining his colonies from time to time, and taking out the combs.

Reading, Pa.

Plowman.

How are the Bees Doing?

C. H. DIBBERN.

This is about the first question asked at this time as one bee-keeper meets another. Bees in this part of the country that are run on modern principles, are in exceptionally good condition. There have been some serious winter losses, but it must, generally, be laid to carelessness and neglect. Our 175 colonies are now (middle of May) in very fine order, in fact, the best I have ever had them so early in the season. A good many hives are becoming crowded, and we have had to put on cases of sections for surplus honey to give them more room. I never knew bees to breed up so rapidly, since putting them on the summer stands.

Now we are ready for the honey harvest. We have got the bees by the millions, to gather the nectar from the prospective crop of honey-locust, white clover, linden and sweet clover. That is certainly a very satisfactory state of affairs, and is perhaps as much as even the most experienced apiarists can do. Very much, in fact everything, still depends on the plants that actually produce the honey. Then, in order to form a correct idea of what the coming crop of honey will be, we must look to the condition of the plants and trees from which it is to be gathered by our thoughtful little servants—the bees.

Owing to very dry, hot weather last fall, much of the white clover was burnt out, and the crop at present does not look very promising. As this is the source of our greatest amount and finest quality of honey, this is a serious drawback. Still it is not best to always look on the dark side; it is possible that good weather will more than make it up. Then, too, the honey-yielding trees—the locust and linden—may be better than usual this year, and make up the loss. At any rate, when the bee-keeper has done faithfully all that can be done, and the supply of honey fails from causes beyond his control, as it occasionally does, he has the satisfaction of knowing that the failure was caused by no fault of his.

The past month has been very dry over a large section of the West, and if we do not get soaking rains soon, the prospects for a honey crop cannot be rated at over "seventy-five," as the agricultural reports would say.

At this time of the year bees need a good deal of water. Where it is not furnished naturally by springs or running streams, it should be provided for them. A good plan is to set a keg or barrel on a gunny-sack spread over a box, and put a pailful or two of water in every morning. Bore a gimlet hole in the barrel near the bottom, and allow the water to drip out on the sack, which should be kept wet all day. Occasionally throw in a handful of salt, as the bees seem to require it, and will keep the water pure and sweet. It is wonderful how the bees will swarm around such a place all day long. Often bees are required to fly a mile or more for their water supply, and as it takes many thousands constantly away from the working force in the fields, the loss from this cause is much more than most bee-keepers imagine. Then, too, why require the bees to wear out their wings going long distances for what can be so easily provided nearer at home?

Milan, Ills.

New York Medical Journal.

The Black Bees of Tasmania and their Medicinal Honey.

In a recent communication to the Paris *Acadimie de Medicine*, which is published in the "Progress Medical" for April 16, Dr. Thomas-Caraman, of Forges-les-Eaux, reported upon a matter which must be regarded as among the most notable of the therapeutic novelties of the day, being nothing less than the discovery of a sort of honey possessing in a remarkable degree the medicinal properties of the *Eucalyptus globulus*, or of some species of *Eucalyptus*.

It seems that, about three years ago, a distinguished French naturalist, M. Guilmeth, who was traveling in Tasmania, came suddenly upon a grove of gigantic eucalyptus trees, from 260 to 390 feet high, and with a trunk so large at the base that it took forty of his Kanackas, joining hands, to reach around one of them. High in these lofty trees he discovered what he at first took to be enormous galls, but which he soon ascertained were the dwelling places of swarms of small, black, wild bees, of a variety before unknown to him. Dr. Thomas-Caraman proposes for this bee the professional name of *Apis nigra mellifica*. Besides being black and smaller than the ordinary honey-bee, this wild bee has its languet rather more developed than that of the domestic bee. M. Guilmeth attempted, unsuccessfully, to domesticate it in Tasmania. He caused some of these immense trees to be felled, and secured the honey. The largest individual store of honey weighed as much as 11,000 pounds avoirdupois.

The honey is described as a thick, homogeneous, somewhat transparent, syrupy liquid, of a deep orange color; having an odor suggestive at once of its containing eucalyptus principles; very soluble in water, in milk, and in wine, but much less soluble in alcohol; and very difficult of fermentation. Its specific gravity is 1.44, and it rotates the polarized ray 22°. In round numbers 1,000 parts contain 611 of invert sugar (mostly levulose), 2 of ash, 215 of water, and 171 of active principles, including eucalyptol, eucalyptene, terpene, cymol and odorous, resinous, and coloring matters. Its taste is described as very pleasant. Administered to dogs, to the amount of from 2½ to 5 ounces a day, it slows the heart's action, and this effect soon becomes so pronounced as to suggest, in Dr. Thomas-Caraman's words, a struggle between the pneumogastric nerve and the cardiac ganglia. At the same time the temperature falls about 1° C. The effects last for at least 24 hours, and include a slight tendency to sleep, but without any symptom of toxic depression. As the result of experiments on himself and on one of his friends, Dr. Thomas-Caraman states that, on taking a table-spoonful of the honey in a little tepid water or milk, after a few minutes one perceives a gentle, agreeable warmth take possession of the whole person. At the end of half an hour, the elimination of the active principles by the air passages having begun, the voice becomes clearer and the breath perfumed; the lungs feel more elastic, more supple. Having continued the use of the honey for a week, four table-spoonfuls daily, the author, who speaks of himself as respectably fleshy, found that he could go up two pairs of stairs, two steps at time, without stopping to take breath or feeling at all blown. At the same time there was slight diuresis with an increase of urea, and the urine had a decided odor suggestive of that of the *Acacia farnesiana* (the plant from which the perfume called "new mown hay" is made).

Besides his observations of the physiological action of the honey, the author cites certain trials of it as a medicine. These data lead him to consider it a valuable aliment, an efficient and palatable substitute for cod liver oil; an anticatarrhal; an agent affecting the heart in a manner comparable to the action of digitalis, but free from the inconvenient properties of that drug; a febrifuge; an antiparasitic specially applicable to the destruction of the micro-organisms of tubercular and scrofulous neoplasms, the *Leptothrix vaginalis*, and oxyures; and, finally, an antiblennorrhagic, by virtue of its being more actively eliminated by the uro-genital tract than either copaiba or sandal oil. It is destined, he thinks, to play a great part in the treatment of laryngeal, bronchial, pulmonary, cardiac and scrofulous affections; in malarial and typhoid fevers; in whooping cough and influenza; and in renal, vesical, and vaginal troubles.

It may be said that Dr. Thomas-Caraman holds up to our view a somewhat rose-colored picture, but it must be confessed that there is no inherent improbability in the notion that an animal organism, like that of the bee, may be able to elaborate the medicinal principles of the eucalyptus in greater perfection than the art of pharmacy can furnish them. Should his impressions be confirmed, however, the practical question at once comes up as to the extent to which commerce can supply us with the genuine wild honey of Tasmania.... It would be interesting to know to what particular species of the genus *Eucalyptus*, the gigantic trees found by M. Guilmeth, belong. Perhaps the active principles of the tree may yet be made available without the intervention of the *Apis nigra mellifica*.

[The above was sent to us by Mr. Eugene Secor, of Forest City, Iowa,

and refers to the eucalyptus honey mentioned on page 243. Honey is no doubt one of the most valuable of medicines, and nearly all the diseases mentioned by Dr. Thomas-Caraman are cured by domestic honey from the American linden tree. Mr. Luther Corey, of Yorkshire, N. Y., says: "On Oct. 1, 1882, I was taken with bilious and gastric fever, followed by a relapse in the shape of inflammation of the lungs and their surroundings, also congestion of a portion. Until within two or three weeks I was unconscious, and therefore not aware of my condition, at which time I commenced eating honey, and have taken it at all times of the day and night, until I have eaten five 2-pound boxes of honey. My cough has subsided, and my lungs are healing, much beyond the physician's expectations. Honey is doing the business. I can now walk about the house."

Herr Karl Gatter, of Vienna, Austria, the principal of the public schools, assured us that his life was saved by the use of honey. He published a small pamphlet on the curative powers of honey, and said: "I, a sufferer from hemorrhages, already given up to despair, and at the verge of the grave, was saved by the wonderful curative powers of honey; and now, thank God, I am freed, not only from weakness of my lungs, but rejoice in the possession of perfect health."

Many persons afflicted with various species of consumption, thank the use of linden honey, either for their entire restoration to health, or for the mitigation of their often painful condition of body and mind.

Honey can also be used with advantage in asthma, in constipation, in sore throat; promotes perspiration, lessens phlegm, and is very healing to the chest, sore from coughing.

Honey mollifies; causes gentle purging, divides and dissolves, warms, nourishes, stops pains, strengthens the tone of the stomach, carries away all superfluous moisture, aids digestion, thins and purifies the blood, and animates and strengthens the breast, nerves and lungs. Honey is therefore to be used when suffering with a *cough, hoarseness, stoppage of the lungs, shortness of breath, and especially with the best results, in all affections of the chest.*

Honey has also great value as a medicine for children, and is readily partaken of by them as a choice dainty dish. It is especially useful to children afflicted with scrofula or rickets. In difficult teething, rub the gums with a mixture made of honey and an emulsion of quinces. For the removing of worms, honey has often been beneficially used, and it is often used in diseases of the mouth and throat.

If the Tasmanian honey is superior to the American—particularly that from the linden trees—it is indeed a boon to mankind.

In California several have reported to the AMERICAN BEE JOURNAL that the bees have gathered excellent crops of honey from the eucalyptus trees. The honey has a fine flavor, though it is a very strong one.

The eucalyptus blooms in Australia from December to March, according to locality, but the trees do not bloom much until the tenth year. We would respectfully ask the apiarists of California to report what their experience has been with the eucalyptus and its honey.—ED.]

Bees a Sacrifice to Prejudice.

In the June number of the Southern *Planter*, published at Richmond, Va., just received, we find the editorial article marked, which gives the details of the sacrifice of an apiary because of the damage done to grapes by "the yellow-jackets." The editor, Mr. W. C. Knight, gives the following as "a reminiscence," which will be excellent proof that bees are innocent of the charges against them in the matter of their supposed depredations upon grapes. It proves that they are unable to puncture the skin of grapes, and that the real culprits are the yellow wasp, known as yellow-jackets. The editor of the Southern *Planter* says:

At an early period of our farming life, 35 years ago, we planted a small vineyard of four varieties of grapes—Catawba, Isabella, Norton and Herbemont Madiera—and as grape culture in South Side Virginia, at that time, was limited to a few garden vines, our effort was a pet enterprise. Our method of planting may be mentioned as it secured thorough drainage, and thus, as we think, preventing the rot which is so much complained of now. Trenches were dug the full length of the trellises, which were to be erected to support the vines, their width being 2½ feet, and depth 20 inches. These trenches were run north and south, to afford the rays and light of the sun on both sides of the vines when trained on the trellises, and each trench had a slight graded fall towards and into a head-ditch which was to act as a secret drain, this ditch being filled to the depth of 10 inches with small stones. In the bottom of the trenches were placed a layer of small stones about 3 inches thick, and on these a layer of 2 inches of broken bones, such as could be gathered about the farm and broken into small pieces with the butt of an axe or heavy hammer. The trenches were then filled with the richest mold which could be procured from the forest, care being taken that it had intermixed sufficient sand to make it light and clay enough to give it body. The vines were then planted in the trenches early in the spring, and cut back to two eyes above the ground, the distance between them being 20 feet, allowing the lateral branches to be trained 10 feet on each side of the main stem on four wires 2 feet apart, and securely fastened to posts 8 feet high, which were set midway between the vines. The wires were fastened to the sides of the posts with small iron staples which are easily drawn when it becomes necessary to renew the posts, and thus prevent any disturbance of the wires or vines.

Our vineyard commenced bearing well the third year, and was in fine thrift the fourth year, when it had a serious set-back by the destruction of the grapes, as they ripened, by bees, as we supposed. There were a few hives about 100 yards off, and it appeared that every bee in them was puncturing and sucking the juice of the fruit. It was hastily determined that the bees must be sacrificed for the protection of the vineyard, and accordingly loads of dry wheat straw were brought and dumped near the hives. After night, when the bees were resting quietly, the hives were gently taken from the stands, piled together—the straw piled over them—and the torch applied, so that in a half hour all were consumed. This seemed to be a cruel act, but justifiable under the principle of *ex necessitate rei.*

Our surprise was great when the next day, a bright and clear one, not a bee was to be seen, but the destruction went on, and it became apparent that innocent lives had been sacrificed, and the real depredators appeared in the form of *yellow-jackets.* They were active and voracious, and could, and did, in plain view pass from bunch to bunch, and with their sharp proboscides puncture and suck the juice until surfeited, when they would fly off in a sluggish manner. A few of the common gray wasps would follow and lap up the exuded sweets, and it became clear that the innocent bees had only been doing the same thing. The vineyard was the victim of an unsuspected enemy, and it was a serious question how his ravages could be checked. Knowing something of the habits of this insect in respect to burrowing into the ground for their nests, we called up an intelligent and observing negro man and put him on the watch. Following out the idea suggested by a recent reading of Cooper's *Oak Openings*, in which was described the plan bee-hunters use for finding bee-trees, this man was enabled to trace the yellow-jackets by the direction of their flight to their

nests, several of which were found within a few hundred yards. The destruction of these insects was accomplished somewhat after the plan pursued with the bees. After nightfall a large arm full of dry straw was deposited over the nest, and then by a violent knocking on the ground the yellow-jackets would rush up from their burrow, and whilst entangled in the straw, the torch was applied and the whole colony burnt up. After this our vineyard remained undisturbed for years.

We have been thus particular in details, as it may tend to settle the question as to honey-bees, and at the same time be of some service to bee-culturists. The yellowish wasp, which is described in the following article from the *Florida Farmer and Fruit Grower*, is doubtless what is known in Virginia as the *yellow-jacket:*

"Many notable horticulturists have complained of the ravages of the honey-bee in their vineyards, and we, like a majority of fruit-growers, have taken it for granted that such was the case, and said no more about it. There are some persons, however, of an inquiring turn of mind, who did not wish to sacrifice their bees upon a bare suspicion, and who have sat down by a vine loaded with ripe fruit, and watched patiently for the true culprit.

"One of these doubters informed us that he is satisfied, from personal observation, that it is impossible for the honey-bee to puncture the skin of the grape. His experiment was as follows: After removing the crop from the vineyard, except one vine, containing a couple of dozen of ripe bunches, he seated himself and waited patiently for the real culprit. Bees and wasps of various kinds came and went without doing any harm. At length his attention was drawn to a species of wasp, which he described as follows: Color of body, dark-red or bronze; wings, steel-blue, with a yellow spot on each shoulder, and some with a yellow spot on the forehead, perhaps a distinguishing mark between the sexes. This fellow alighting on the berry, with his strong mandibles ripped up the fruit, cutting a long gash as neatly as a doctor's lancet, proceeded to fill himself with the sweet juice, and afterward went to every bunch upon the vine, until all of them were ruined. Other insects, bees included, followed in his wake, and naturally partook of the spoils. May it not be possible that this insect is causing all the damage heretofore charged to our friend, the honey-bee?"

[Yes; yes, and the bees have been persecuted, dragged into court, belied, and finally many have lost their lives on the "altar of superstition and ignorance!" Their innocence, however, is now established beyond doubt! Will the fruit-culturists now please to do justice—*simple justice*—to their little friends, the bees! It is beyond question that, but for the fertilization of the flowers by the bees, there would be no fruit; and the then fruit-growers might be as presistent in their demands for the bees to come and restore their fruit-trees to fertility, as they have been ceaseless in their demands for the destruction of their best friends—the bees.—ED.]

Local Convention Directory.

1887.	Time and place of Meeting.
Nov.	——North American, at Chicago, Ills. W. Z. Hutchinson, Sec., Rogersville, Mich.
Dec. 7-9.	—Michigan State, at East Saginaw, Mich. H. D. Cutting, Sec., Clinton, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER-BOX

Honey Crop of California.—Hamlin & Bearss, Kansas City, Mo., on May 23, 1887, writes as follows:

A friend of ours in San Diego, Calif., write thus: "Only one-sixth of a crop this year. In our part of the State we shall have no honey, owing to dry weather killing off the clover last summer."

Very Favorable Prospects.—H. E. Hill, Titusville, Pa., on May 24, 1887, writes:

I think that where bees were properly cared for last fall, the loss in this locality has been small; nevertheless some have lost heavily. One who had 10 colonies, I understand, lost all. Another with 125, has 85 left. Various others report small losses. Out of 51 colonies and 6 nuclei put into winter quarters, I lost 1 colony and 3 nuclei. The remaining 50 are in good condition to meet the honey when it comes, which will be very soon, as white clover is now opening, in some places the large white heads being quite numerous. We are now enjoying a delightful rain, which is timely, as it has been extremely dry this spring. Older and wiser heads say "it has just saved the clover crop!" The prospect is very favorable for a good season.

No White Clover Yield.—R. Grinsell, Baden, Mo., on May 27, 1887, says:

My bees are in fine condition, and there has been all spring lots of bees and brood, but my 110 colonies have not got 100 pounds of honey in their hives altogether. I am now feeding them. White clover has been in bloom for the last two weeks, but they have gathered no honey from it yet. We had a very wet spell from May 1 up to May 22—not a single day without rain. We have had no rain now since Sunday, and the bees have been getting a little honey out of white clover yesterday and to-day. We may get some honey from clover yet, but I do not look for it. I think some of those that are selling clover honey in St. Louis for 9 cents per pound, will wish they had it next winter, for it will be worth a good deal more then. Bee-keepers will do well this year by holding their honey.

Early Swarming, etc.—D. D. Herrick, Libertyville, Ills., on May 29, 1887, says:

I put 23 colonies into the cellar on Dec. 1, 1886, and on April 12, 1887, I took out 21 strong ones and 1 queenless colony. The temperature ranged from 45° to 48°. My first swarm issued on May 14. Who is ahead of that? A good many colonies are storing in the supers, and all are very strong; but I have had no swarms for a week, as it has been too cold.

Heard the Bees Roar.—Elmer Gabril, Marshfield, O., says:

Bees do roar in winter after the mercury is below zero, and the colder the weather the louder is the roaring, which I have heard many a time, and have witnesses of the fact besides myself.

Killing off Drones.—A Subscriber at Flint, Mich., on May 28, 1887, writes:

What is the cause of my bees killing off their drones at this time in the year? One colony in particular has killed and drawn out of the hive all their drones, and as yet has not swarmed this season, but they seem to be in perfect state of health in every way.

[Quite often drones are "killed off" between apple and white clover blooms because of a dearth in the supplies, and the bees become discouraged, and for the time being give up all idea of swarming. Then to save their food supply, kill off the drones.—ED.]

Some Loud Roaring of Bees.—11—S. A. Shuck, (102—98), Liverpool, Ills., says:

My bees have been wintered on the summer stands unprotected for the last 8 years, except the winters of 1882-83 and 1886-87. During very still, cold weather they can always be heard. In very cold weather, at times they can be heard some 40 or 50 feet from the hives.

White Clover a Failure, etc.—Wm. Anderson, Sherman, Mo., on May 30, 1887, says:

There will be no honey in this part of the State, unless a change should come in the future. There is no honey coming in, and bees are storing hardly enough to live on. White clover is a

total failure: it does not seem to bloom very much. Red clover is almost all killed by the winter. Out of about 50 colonies of bees there is not 100 pounds of good honey, so you may have an idea about the honey in this section of the country. Bees did well the past year; they had more honey when spring commenced than they have now. I have had 3 swarms this season out of 47 colonies. They had about 10 pounds of honey to the hive when spring came, and to-day they have not got 2 pounds per hive. How many colonies of bees can be kept in one place, and make a paying business of it?

[It is impossible to answer the last question—so much depends upon the season as well as the pasturage for bees in the surrounding country.—ED.]

Loss of Bees by Moving, etc.—O. O. Poppleton, Hawk's Park, ⊙ Fla., on May 21, 1887, writes:

The item on page 291 is so worded as to convey an entirely wrong idea of the cause of the loss of the bees brought from Iowa last fall. They were not lost on account of the climatic conditions here, as one would suppose from the item referred to, but from bad carriage in bringing them down here. The car in which they were packed was seven weeks on the road, and the only wonder is that any were left alive on getting here! I tried to bring only 82 of my weakest colonies, leaving 148 colonies back in Iowa in care of my brother. He writes me, under date of April 25, that 138 came through in good condition, containing at that date from 2 to 7 frames of brood each, and averaging about 5 frames of brood each. This is an uncommonly good condition for bees to be in, so early in the season in that latitude.

Working up a Honey Market, etc.—Earle Clickenger, Columbus, ⊙ O., writes:

I am trying to build up a local trade on pure honey, but I find it quite difficult; but with all the drawbacks of prejudice in the public mind on account of adulteration, last year I sold about 9,000 pounds of pure honey, and to-day have the largest trade in the city in a retail way. It is a hard thing to convince the people that they can depend upon getting pure honey. I sold 40 colonies of bees last fall, and still have 40 colonies left; those I sold brought on an average $5 per colony. Last year I produced 3,000 pounds of comb honey, and 1,000 pounds of extracted honey. I would like to have saved all of them, but I have "too many irons in the fire."

Moving Bees to Basswood Bloom.—B. F. Woodcock, Pleasantville, ♀ Iowa, on May 27, 1887, writes:

Will it pay to move my bees 3 miles north of their present location to a basswood grove? We have had but one or two little showers in this locality since last October; white clover (my usual source of honey) is drying up, and yields no honey, though the fields are white with sickly, puny bloom. I live on the prairie. I went to the basswood grove to-day and find thousands of trees which will bloom profusely. I can get a good location in a friend's orchard. The nearest point for my bees now to reach the timber is 2½ miles, while the bulk of the basswood is 3 to 3¼ miles. Do you think it will pay me to move my 115 colonies at the opening of the bloom? The friend lives 2¾ miles from me. Will many, if any, of the bees come home to their old location after being removed?

[No; it would not pay for the expense and trouble of moving your bees to the basswood grove, which you state is only from 2½ to 3¼ miles from your apiary. Bees appear to enjoy a flight when seeking stores; often passing by *good* pasturage near the apiary, and working on *inferior* bloom at a distance of 2 or 3 miles! It is generally conceded that bees fly from 3 to 5 miles in quest of stores, and as the basswood grove is within that distance, it is just in the right place to suit their "notions."—ED.]

More Rain Needed.—A. D. Stocking, Cedar Beach, ♂ Ind., on May 29, 1887, writes:

It has been very dry here for sometime. White clover is very backward in blooming, and unless we have good rains soon there will be but little white clover honey. We have had several light rains within two weeks, but we had so little spring rains that what rains we have had lately seem to have done sod lands but little good, and grass is suffering; but on spring-plowed lands crops are growing finely. Our prospects for apples are poor; the trees bloomed full, but from some cause but little fruit has set; but where peach-trees are alive we shall have peaches. Bees have built up strong, and have commenced swarming. They wintered well generally in this locality.

Honey from Red Clover.—David Brown, Maple Creek, ☉ Nebr., on May 31, 1887, writes:

In the last paragraph of an article by Prof. W. W. Cooke, on page 330, he says: "In the United States, hive-bees never suck red clover." For the last 2 years my bees have collected honey freely from the red-clover field. During the summer of 1885, I accidentally was crossing my clover field (second crop), and found my bees humming from flower to flower, and on examination of the hives, showed me that they were storing honey rapidly from my red clover. Last season they worked considerable on the first crop, but quite freely on the second crop, giving me the finest quality of honey I ever obtained. So satisfactory was the honey that my customers have ordered for next year, if I can only supply a corresponding article. From 8 colonies, spring count, I obtained over 2,000 pounds of comb honey in one-pound sections, mostly from my clover field. For weeks bees could be found at every step, during sunshine, in the clover field. It yielded an abundant crop of seed. Has no one else had a similar experience?

[The Professor, no doubt, meant "never—well, hardly ever"—sometimes—not universally.—DD.]

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—Sellers ask from 7 to 10 cts. for anything off in comb honey; this includes dark undesirable and crooked combs, and 2-pound sections. Good 1-lb. sections, 10@12c.; choice, 12½@13c.—
BEESWAX.—25c. R. A. BURNETT,
Mar. 28. 161 South Water St.

DETROIT.

HONEY.—Best white comb, 11@12c. Market is nearly bare, awaiting the new crop.
BEESWAX.—23@24c.
May. 11. M. H. HUNT, Bell Branch, Mich.

SAN FRANCISCO.

HONEY.—We quote: Extracted, white, 4½@5 cts.; light amber, 4½c.; amber, 4¼c. Comb, white, 12@14c.; amber, 7@9c. Demand good.
BEESWAX.—23c.
May 8. SCHACHT & LEMCKE, 122-124 Davis St.

CLEVELAND.

HONEY.—Choice white in 1-lb. sections, 12@13c.; second quality, 10@11c.; and buckwheat unsalable at 8@9c. Extracted, 5@6c.
BEESWAX.—25c.
Apr. 20. A. C. KENDEL, 115 Ontario St.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 3½@4½c. Extra fancy, ¼ more than foregoing prices. Extracted, 4½@6c. Market dull.
BEESWAX.—Steady at 20½c. for prime.
May 20. D. G. TUTT & CO., Commercial St.

SAN FRANCISCO.

HONEY.—We quote: White comb, 12@14c.; amber, 7@10. Extracted, white, 4½@5c.; light amber, 3½@4¼c. Market quiet.
BEESWAX.—19@21c.
May 14. O. B. SMITH & CO., 423 Front St.

MILWAUKEE.

HONEY.—We quote: Finest white 1-lb. sections, 12@12½c.; choice white 1-lbs., 11@12c.; choice 2-lbs., 10@11c.; dark not wanted, and imperfect slow. Extracted, finest white in kegs, 6½@7c.; good white in kegs and barrels, 6@6½c.; dark, 4 to 4½c. Demand good and market firm.
BEESWAX.—25c.
May 4. A. V. BISHOP, 142 W. Water St.

NEW YORK.

HONEY.—We quote: White comb, 9@12c.; dark 5@7c. California comb, 8@9c.; extracted, 5@6c. Sales large and demand good.
BEESWAX.—23@24½c.
McCAUL & HILDRETH BROS.,
May 10. 28 & 30 W. Broadway, near Duane St.

KANSAS CITY.

HONEY.—We quote: White clover 1-lbs., 10@12 cts.; dark, 9 to 10c. White clover 2-lbs., 10 to 11c.; dark, 9 to 10c. Extracted, 5 to 6c. in small way. Very little extracted in the market.
May 16. CLEMONS, CLOON & CO., cor 4th & Walnut

BOSTON.

HONEY.—1-lb. packages of white clover honey at 13@15c.; 2-pounds at 11@13c. Extracted, 5@7c. Sales slow.
BEESWAX.—26 cts. per lb.
Apr. 22. BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI.

HONEY.—We quote for extracted, 3@7c. per lb. Best comb brings 11@14c. per lb. Demand fair.
BEESWAX.—Good demand,—20@23c. per lb. for good to choice yellow.
May 21. C. F. MUTH & SON, Freeman & Central Av.

AMERICAN BEE JOURNAL

ESTABLISHED IN 1861 — OLDEST BEE PAPER IN AMERICA

Issued every Wednesday by

THOMAS G. NEWMAN & SON,
PROPRIETORS,

923 & 925 WEST MADISON ST., CHICAGO, ILL.

At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

Dr. Miller's Book, "A Year Among the Bees" (75 cts.), and the BEE JOURNAL for one year ($1.00), both of which we will club for only **$1.50.**

The Convention History of America with a full report of the proceedings of the Detroit and Indianapolis conventions, and the AMERICAN BEE JOURNAL for one year, will be clubbed for $1.25.

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

We will Present Webster's Dictionary (pocket edition), and send it by mail, postpaid, for two subscribers with $2. It is always useful to have a dictionary at hand to decide as to the spelling of words, and to determine their meaning.

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructable. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

Regular as Clock-Work.—I. R. Good, Nappanee, Ind., put an advertisement in the AMERICAN BEE JOURNAL, and 10 days after sending the copy, writes thus:

On Wednesday of each week we get the AMERICAN BEE JOURNAL, and that as regular as clock-work! On Thursday I commenced to get orders from parties saying they saw my advertisement in the AMERICAN BEE JOURNAL yesterday. The next day I got a number more orders for bees and queens amounting to $65.80. My advice to all is—Do not advertise in the AMERICAN BEE JOURNAL unless you are prepared for a *rush!* I. R. GOOD.

The experience of Mr. Good certainly is "good enough" for any one. The advertisement he mentions cost him only $2.00, and he had to order it out before a week had passed, because he received orders faster than he could rear queens and bees.

This reminds us of the experience of Mr. Henry Alley, of Mass., who some time since wrote us as follows:

I get the quickest return from an advertisement inserted in the AMERICAN BEE JOURNAL of any paper I ever advertised in. The BEE JOURNAL is mailed on Tuesday; it reaches me on Friday, and Saturday I frequently get calls for my circular from New York and Pennsylvania. HENRY ALLEY.

As the AMERICAN BEE JOURNAL circulates in every State, Territory and Province, among farmers, business and professional men—it commands an audience upon which advertising cannot be wasted!

Home Market for Honey.

☞ To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., 40 cts.; per hundred, **$2.50.** Five hundred will be sent postpaid for **$10.00**; or **1,000** for **$15,00.** On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell lots of it.

System and Success.

☞ All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

Some Additions to our Catalogue.—WHITE POPLAR 4-PIECE DOVETAIL SECTIONS for a fancy article of comb honey (4¼x4¼ inches—7 to the foot)—in packages of 500 for $2.50; 1,000 for $4.50.

ENAMELED CLOTH, for covering frames, price per yard, 45 inches wide, 20 cents; if a whole piece of 12 yards is taken, $2.25; 10 pieces, $20.00; if ordered by mail, send 15 cents per yard extra for postage.

OUR CLUBBING LIST.

We supply the **American Bee Journal** one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	Club
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	1 25	1 25
Bee-Keepers' Guide	1 50	1 40
The Apiculturist	2 00	1 70
Canadian Bee Journal	2 00	1 75
Rays of Light	1 50	1 35
The 7 above-named papers	5 25	4 50
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 00
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 75	1 50
Convention Hand-Book	1 50	1 30

One yearly subscription for the AMERICAN BEE JOURNAL must be ordered with each paper or book, in order to take advantage of the prices named in the last column.

E. Duncan Sniffen, Advertising Agent, 3 Park Row, New York, inserts advertisements in all first-class Newspapers and Magazines with more promptness and at lower prices than can be obtained elsewhere. He gives special attention to writing and setting up advertisements in the most attractive manner, and guarantees entire satisfaction. In all his dealings, he is honorable and prompt. Send for his Catalogue of first-class advertising mediums. Mailed free. 52A40t

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

The Production of Comb Honey, as practiced and advised by W. Z. Hutchinson, can be obtained at this office, for **25 cts.**

☞ **Sample Copies** of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have now gotten up a lot of these Labels, and can supply them at the following prices: 100 for $1.00; 250 for $1.50; 500 for $2.00; 1,000 for $3.00; all with name and address of apiarist printed on them—by mail, postpaid.

Should any Subscriber receive this paper any longer than it is desired, or is willing to pay for it, please send us a postal card asking to have it stopped. Be sure to write your name and address plainly. LOOK AT YOUR WRAPPER LABEL.

Medley of American Bee-Keepers.—I have a few left of this Medley, and any one who desires to look upon the faces of 130 of the principal apiarists of America—dead as well as living—should send $1.00, at once, for a copy, to

E. O. TUTTLE, Charlotte, Vt.

Preserve your Papers for reference. If you have no **BINDER** we will mail you one for 60 cents, or you can have one FREE if you will send us 3 new yearly subscriptions for the BEE JOURNAL.

Advertisements.

ITALIAN Bees and Queens for sale.—Untested Queen, 75 cents; 6 for $4.00. Send for Circular, Free.—JOHN NEBEL & SON, High Hill, Mo.
23A8t

300 BEST QUALITY ENVELOPES or Letter-heads, neatly printed to order & delivered, $1; 100 for 40c. Satisfaction guaranteed. A trial solicited.—BRICKER, Printer, Slate Lick, Pa.

BEE-KEEPERS—read and save Money. Sections, Crates, Frames, Foundation, Hives, etc. Sections, $3.50 per 1,000. Send for Price-List. **C. MATHEWS,**
23A13t IMLAY CITY, MICH.

BEES and QUEENS FOR SALE.

ONE Pound of Bees and 1 frame of brood with Untested Queen, $2.75; 1 Untested Queen, 60 cts.; 2 Queens, $1.00, BEES, 50 cents a lb.; 3-frame Nucleus, $3.50; 4-frame, $4.00—Queen included. All prepaid.

W. G. HAYEN, Pleasant Mound, Ill.
23A1t

W. Z. HUTCHINSON,

Rogersville, Genesee Co., Mich.,

WOULD respectfully call the attention of all who use Foundation, to the fact that he has written, published, and now offers for sale a neat little book of 45 pages, entitled

"THE PRODUCTION OF COMB HONEY;"

in which, among other things, is made as clear as possible the question of when, where and how to use Foundation. When empty combs are preferable. When the bees should be allowed to build their own combs. How to prevent the building of drone-comb, etc., etc., etc.

The price of the Book is only 25 cents, and the knowledge gained from its perusal will enable its possessor to save more than the price of the book, in foundation, upon *each swarm hived;* and secure more honey into the bargain. Don't wait until the swarming season is over, but send for the book NOW—and be ready to test, this season, the plans and methods it advises. 23Atf

Dadant's Foundation Factory, wholesale and retail. See advertisement in another column.

Alley's Queens!

Warranted, $1; Select, $1.25; Tested, $1.50

AMERICAN APICULTURIST 1 year and Select Queen, $1.50. **How to Rear Queens** (300 pages, 100 Illustrations, bound in cloth), by mail, and one Tested Queen, $2. **How to Get Comb Honey,** 20 pages, 10 cents. Address, **HENRY ALLEY,**
21Atf WENHAM, Essex Co., MASS.

Chapman Honey-Plant Seed

(Echinops sphærocephalus.)

We can supply this seed **POST-PAID** at the following prices: One-half ounce, 50 cents; 1 ounce, $1; 2 ounces, $1.50; 4 ounces, $2; ¼ pound, $3; 1 pound, $5. One pound of seed is sufficient for half an acre, if properly thinned out and re-set.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

"Boss" One-Piece Sections,

MANUFACTURED BY

J. Forncrook & Co., Watertown, Wis

Patented June 28, 1881.

WE will furnish you SECTIONS as cheap as the cheapest. Write for price-list.
Watertown, Wis., May 1st, 1887.

COMB FOUNDATION.

DUNHAM Brood Foundation, 40c per lb; Extra-Thin Vandervort Foundation, 45c. per lb. **WAX** made into foundation for 10 and 20c. per lb. **Ten** per cent. discount on all orders received before the 15th of April. **Samples free.** F. W. HOLMES,
9Dtf Coopersville, Mich.

A GREAT SCHEME! Sell honey to the millions. Examine our new, peculiar Small Honey Package, and our brilliant Chromo Card. See our large advertisement once a month, or address,

J. H. MARTIN, HARTFORD, N. Y.
6W(3tm)40t

EXTRA NICE

SECTIONS and **Foundation** at reduced prices. Send for samples.

Also a full line of SUPPLIES at very low rates. Price-list free.

☞ **Cash for Beeswax.**

A. F. STAUFFER & CO.,
3Dtf STERLING, ILLS.

HUMPHREYS'
HOMEOPATHIC SPECIFIC No. 28

In use 30 years. The only successful remedy for

Nervous Debility, Vital Weakness,

and Prostration, from over-work or other causes. $1 per vial, or 5 vials and large vial powder, for $5. SOLD BY DRUGGISTS, or sent postpaid on receipt of price.—Humphreys' Medicine Co., 109 Fulton St., N. Y.
16A12t

Send 75 Cents for my New Book—"A Year among the Bees;" 114 pages, cloth bound. Address,
DR. C. C. MILLER,
20Atf MARENGO, ILLS.

DR. FOOTE'S

HAND-BOOK OF HEALTH,

HINTS AND READY RECIPES.

is the title of a very valuable book that gives a great amount of information, of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping Bathing, Working, etc.

IT TELLS ABOUT

What to Eat,	Parasites of the Skin,
How to Eat it,	Bathing—Best way,
Things to Do,	Lungs & Lung Diseases,
Things to Avoid,	How to Avoid them,
Perils of Summer,	Clothing—what to Wear,
How to Breathe,	How much to Wear
Overheating Houses,	Contagious Diseases,
Ventilation,	How to Avoid them,
Influence of Plants,	Exercise,
Occupation for Invalids,	Care of Teeth,
Superfluous Hair,	After-Dinner Naps,
Restoring the Drowned,	Headache, cause & cure,
Preventing Near-Sightedness,	Malarial Affections,
	Croup—to Prevent.

IT TELLS HOW TO CURE

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